Multi-scale Fluid-Solid Interactions in Architected and Natural Materials (MUSE)

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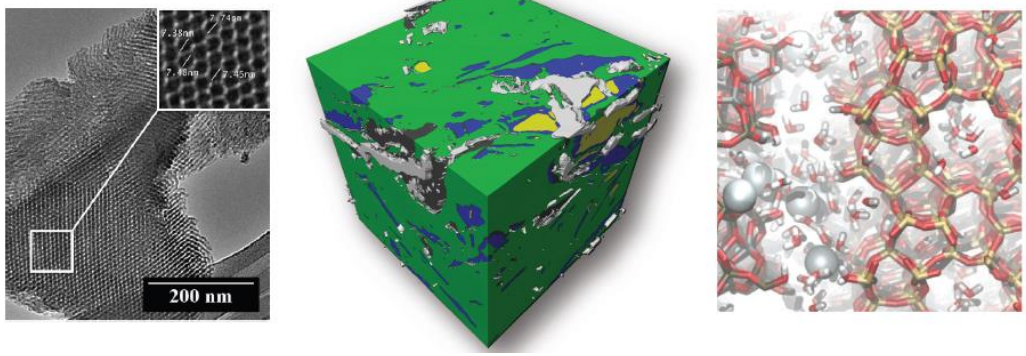
MISSION: To synthesize geomaterials with repeatable hierarchical heterogeneity and develop an understanding of transport and interfacial properties of fluids confined within these materials.

Synthesis, characterization of geomaterials
Understanding properties of fluids in confined media



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RESEARCH PLAN

Synthesized heterogeneous, geomaterials will be used as substrates for determining the transport and interactions of multi-phase fluids over many length scales, including at the nanometer scale. Dynamic in-operando determination of material and fluid properties will be performed, and these measurements will be used for the development of experimentally-validated, atomistically-informed modeling tools and frameworks.

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